

## PRECIPITATION.

The general distribution of rain and snow is shown upon Chart No. III, from which it will be seen that the region of largest rain-fall covers Tennessee and the central Gulf States, with small areas of large rain-fall on the immediate South Atlantic coast. This latter feature is wanting in the rain-falls of 1874-'75-'76. An area of largest excess of rain over normal values is shown by the table on same chart to have been especially marked in the South Atlantic States and Tennessee, over which regions the precipitation has been two or threetimes its average value. A region of large rain-fall is also well marked throughout the Missouri valley.

*Small Monthly Precipitations.*—The total amount of rain and melted snow has been less than 0.5-inch at the following stations: Key West, 0.46; San Diego and San Francisco, 0.26; Maricopa Wells, 0.03; Wickenburg, 0.45; Brownsville, 0.13; Stockton, 0.09; Fort Bridger, Wyoming, 0.34; Camp McDermott, Nev., 0.20.

*Large Monthly Precipitations.*—The total amount of rain and melted snow has been 10 inches, or more, at the following stations: Cape Lookout, 10.65; Charleston, 15.00; Memphis, 13.90; Montgomery, 10.36; Carlowville, Ala., 15.10; Fayette, Miss., 10.30; Brookhaven, Miss., 12.00; Austin, Tenn., 10.70; Clarksville, Tex., 10.25.

*Largest Special Rains or Snows.*—Among the large special rains are the following; Vicksburg, 7th, 3.36; Fort Sully, 16th and 17th, 3.01; Denver, snow, 27th, 16 inches; Cape Lookout, 13th and 14th, 5.80; Charleston, 8th, 4.06, 13th, 8.30; Denison, 25th and 26th, 3.70; Green Springs, Ala., 7th, 4.75; Fort Gibson, 6th and 7th, 4.60; Galveston, 23d, 24th and 25th, 6.62; Grand Haven, 18th and 19th, 3.11; Leavenworth, 16th to 19th, 4.95; Memphis, 17th to 19th, 3.06, 24th to 27th, 4.43; Milwaukee, 18th and 19th, 4.55; Montgomery, 7th and 8th, 4.79, 27th and 28th, 3.01; Norfolk, 9th and 10th, 5.13; Genoa, Neb., 26th, 27th and 28th, 6 inches snow.

*Hail-storms.*—Besides numerous light hail-storms, severe ones are reported at Fort Larned, Kan., on the 22nd, Clarksville, Texas, 7th and 26th, Vicksburg, 7th, Austin, Texas, 26th. Morgantown, W. Va., on the 28th, from 5:15 to 5:19 p. m., occurred a fall of remarkably large hail; the largest hail measured 2 in. longest diameter and 1½ in. shortest; for two minutes preceding these large hail a smaller size fell, and for six minutes preceding, or beginning at 5 h 7 m., rain fell; the fall began with the wind SE., brisk backing to NW. at 5:26, and to W. at 5:45; the smaller-sized hail were generally round, with a nucleus of ice; of the largest size about one half had an ice nucleus, the remainder were composed of ice and snow. "A very noticeable feature on the larger stones was that when held in front, with the cone upwards, a twist or curve proceeded from the shoulders of the hail stone to the top of the cone from left to right," see the accompanying figure; the total precipitation during the storm was about 0.87 in. "Fifteen of the largest hail-stones were collected and melted, and gave 0.26 in. water in the gauge," which is equivalent to an average cubic contents for each hail-stone of 0.873 cubic inches.

*Monthly Snow-fall.*—The depth of snow-fall has been reported as follows: Golden, Col., 43.4 inches; Iowa, 4 to 12; Maine, 2 to 3; Mass., 2 to 3; Mich., 3 to 4; Neb., 2 to 6; N. H., 1 to 3; N. Y., 0.5; Vt., 1 to 7; Va., 0.5; Wis., 4 to 10.

*Depth of snow on ground at close of month.*—Iowa, 6 inches.

*Rainy Days.*—The number of days in which appreciable rain fell have averaged about as follows: New England coast and Middle Atlantic stations, 10 to 17; South Atlantic coast, 10 to 15; Gulf States, 9 to 16; Tennessee and the Ohio valley, 10 to 19; Lower Lake region, 8 to 14; Interior of New England, 7 to 10; Upper Lake region, 7 to 13; Upper Mississippi valley, 9 to 13; Lower Missouri valley, 14 to 19.

*Cloudy Days.*—The number of days on which the cloudiness has averaged eight-tenths or more, as reported principally by voluntary observers is as follows: New England, Middle Atlantic and South Atlantic States, Gulf States, Tennessee and Ohio valley, 7 to 16; Lake region, 11 to 17; Northwest, 6 to 13.

## RELATIVE HUMIDITY.

The Relative Humidity averages on the coast of New England, 66 per cent.; Middle Atlantic States, 69; South Atlantic States, 71; Gulf States, 70; Tennessee and the Ohio valley, 63; Upper Mississippi valley, 62; Lower Missouri valley, 64; Upper Lake region, 67; Lower Lake region, 64; San Francisco, 68. At high stations, the averages uncorrected for the low pressures are Salt Lake City, 43; Santa Fe, 40; Pike's Peak, 87; Denver, 51; Cheyenne, 65; Mt. Washington, 64.

